Author's response to reviews

Title: Hip resurfacing in a district general hospital: 6-year clinical results using the ReCap hip resurfacing system

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Author's response to reviews: see over
Dear editor, dear reviewer,

We thank the reviewer for providing us with the opportunity to further improve the quality of our manuscript. Below, we have given a point-to-point response to the issues raised by the reviewer after reviewing our revised manuscript.

Reviewer: Richie Gill

1. The number of aseptic loosening cases (5) appear to be quite high and these have occurred relatively early, comment and Discussion on this is needed. Do the authors think that the cementing technique for the ReCap is implicated?

   Dear reviewer, we agree that the number of aseptic loosening cases is quite high. We know for sure the cementing technique is not involved since the resurfacing design used has a cemented femoral component and an uncemented acetabular component. Since all loosening involved only acetabular components and no femoral components, the cementing technique at fault. However, insufficient acetabular fixation is a very important point and we have therefore added the following sentences to our manuscript.

   Results section, revision details paragraph:
   All cases of aseptic loosening only involved the uncemented acetabular component.

   Discussion section:
   All cases of aseptic loosening occurred relatively early and involved only the uncemented acetabular component. We think that insufficient seating of the acetabular component, which might occur due to deformation of the relatively thin cup during the impaction procedure, may have caused these early revision cases.

2. Also some discussion of the two pain cases is needed, were metal ions taken in these cases? This is possibly a metal reaction related problem.

   Dear reviewer, it might be very well possible these two revision cases for persistent pain were related to a metal debris reaction. No metal ion samples were taken but during revision surgery, there was no metallosis visible. Post-operative tissue analysis however showed chronic inflammatory signs including synovial hyperplasia en some metallosis in both patients. We have therefore included the following sentences to our manuscript.

   Results section, revision details paragraph:
   During revision surgery no metallosis, soft tissue cysts or solid masses were observed, although postoperative histopathological analyses showed chronic inflammatory signs.
including synovial hyperplasia en some metallosis in both patients revised for persistent pain, indicating adverse local tissue reaction to metal debris.

**Discussion section:**
In our series we have not observed any signs of ARMD during revision surgery, although post revision surgery two patients revised for persistent pain had histopathological evidence of adverse local tissue reaction (ALTR) to metal debris. Neither have we observed any signs of ARMD with diagnostic ultrasound scans in patients who were post-operatively symptomatic. We cannot completely rule out the presence of ARMD in our series, but since we observed two cases of ALTR, future follow-up will include routine metal ion analysis.